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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,197

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Michael Schafer

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EXAMINER

NGUYEN, CHAUN

ART UNIT

PAPER NUMBER

2831

MAIL DATE

DELIVERY MODE

10/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,197	Applicant(s) SCHAFFER, MICHAEL	
	Examiner Chau N. Nguyen	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 5 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/19/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature of the conductor comprising between 5 and 198 individual conductor elements as claimed in claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top

margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1-3, 9-11, 16-18 and 20 are objected to because of the following informalities:

Claim 1, line 2, after "which" insert --has at least two layers and--;

Claim 1, line 3, change "at least one layer of the sheathing" to --an inner layer of said at least two layers--;

Claim 1, line 5, before "at least" insert --said-- and delete "of the sheathing";

Claim 2, line 2, change "layer" to --of the layers--;

Claim 3, line 2, change "layer" to --of the layers--;

Claim 3, line 3, delete "apart from the outer layer";

Claim 9, line 3, before "layer" insert --inner-- and delete "lying therebeneath";

Claim 10 should be amended as --A conductor according to claim 1, wherein the inner layer has a thickness of between 0.1 mm and 2 mm or between 0.2 mm and 1 mm--, see paragraph [0014] of the specification;

Claim 11, line 3, change "five and one hundred and ninety eight" to --5 and 198--;

Claim 16, line 2, change "one layer" to --two layers--;

Claim 16, line 3, change "surrounds" to --surround-- and "at least" to --said at least--;

Claim 17, line 1, change "the sheathing" to --said two layers--;

Claim 18, lines 1-2, change "layer of the sheathing apart from the outer layer" to --of said two layers--; and

Claim 20 should be amended to depend on claim 16, otherwise it is a redundant of claim 6. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-4, 11, and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Krenzer et al. (6,657,122).

Krenzer et al. discloses a conductor for liquid-cooled windings comprising an insulating sheathing which has at least two layers and surrounds the conductor as a whole, wherein an inner layer of the at least two layers surrounds the conductor so as to cover it completely, and wherein an outer layer of said at least two layers has openings, meshes, or frayed sections (col. 2, lines 51-53 and lines 57-62, Krenzer et al. discloses that tape 8 can be wrap onto the conductor with overlapping edges and the tape may be coated with a bakable resin such as epoxy resin, which is an inner layer of the sheathing) (re claims 1 and 16). Krenzer et al. also that at least one of the layers is formed by being wound around the conductor

(re claim 2), at least one of the layers is made from paper (re claims 3 and 18), the outer layer is made from perforated paper (re claim 4), the conductor comprising between 5 and 198 conductor elements (re claim 11), and each layer of the sheathing is formed by being wound around the conductor (re claims 15 and 17).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 6, 7, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perger et al. (WO 95/30991) in view of Younsi et al. (2002/0029897).

Perger et al. discloses a conductor for liquid-cooled windings, comprising an insulating sheathing which has an outer layer and surrounds the conductor as a whole, Wherein the outer layer has meshes. Perger et al. also discloses the outer layer being formed by a net or woven fabric which is made from a plastic. Perger et al. does not disclose the sheathing comprising an inner layer completely covering the conductor. Younsi et al. discloses a sheathing comprising an inner

layer (26) and an outer layer (28), wherein the inner layer completely surrounds the conductor. It would have been obvious to one skilled in the art to provide the conductor of Perger et al. with an inner layer as taught by Younsi et al. to protect the conductor from the environment. It would also have been obvious to one skilled in the art to choose suitable diameter for the meshes of Perger et al. to meet the specific use of the resulting conductor since it has been held that where the general conditions of a claim are disclosed by the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

7. Claims 8-10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krenzer et al.

Krenzer et al. discloses the invention substantially as claimed except for the diameter of the openings, the proportion coverage of the outer layer, the thickness of the inner layer, and the conductor cross-section. Although not disclosed by Krenzer et al., it would have been obvious to one skilled in the art to choose suitable dimensions for the openings, the coverage, the inner layer thickness, and the conductor cross-section to meet the specific use of the resulting conductor since it has been held that discovering the optimum or workable ranges involves

only routine skill in the art. *In re Aller*, 105 USPQ 233. It would also have been obvious to one skilled in the art to use the conductor of Krenzer et al. in a liquid-cooled transformer where the conductor is cooled by a mineral oil or an ester liquid since the conductor of Krenzer et al. has good heat removal.

Allowable Subject Matter

8. Claims 5 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutiérrez can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chau N Nguyen/
Chau N Nguyen
Primary Examiner
Art Unit 2831